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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,987	12/24/2001	Isaac Levanon	FLVT3001	3638

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3DVU
28 Levy Eshcol St.
Rannana, 43703
ISRAEL

EXAMINER

LAZARO, DAVID R

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,987

Applicant(s)

LEVANON ET AL.

Examiner

David Lazaro

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the RCE filed December 28, 2005.
2. Claims 1-22 are pending in this office action.

Response to Amendment

3. The Affidavit/Declaration filed on December 28, 2005 under 37 CFR 1.131 is sufficient to overcome the Robotham reference (U.S. Patent 6,704,024).
4. Accordingly the grounds of rejection based on Robotham have been withdrawn. However, new grounds of rejection are presented in this office action.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-5, 8-11, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by anticipated by U.S. Patent 6,711,297 by Chang et al. (Chang).
7. With respect to Claim 1, Chang teaches a method of retrieving large-scale images over network communications channels for display on a client device (Col. 5

lines 56- 60: source image can be any large data file, including images, and method is operable over network environment), said method comprising the steps of:

a) selecting, based on an operator controlled image viewpoint relative to a predetermined image, an update image parcel to display via said client device (Col. 9 lines 40-60: user controls operational viewpoint in relation to the image, an update parcel is selected as a result of this control);

b) preparing a request for said update image parcel wherein said request is associated with a request queue (Col. 9 lines 40-60: update parcel, i.e. physical coefficients, request is prepared);

c) issuing said request over a communications channel (Col. 9 lines 40-60: request transferred to the server);

d) receiving said update image parcel from said communications channel (Col. 9 lines 61-66: server receives the request and responds with the update); and

e) displaying said update image parcel as a part of said predetermined image, wherein said update image parcel uniquely forms a discrete portion of said predetermined image (Col. 9 line 61 - Col. 10 line 3: response is used to update the display; also note Col. 7 lines 19-36 noting that update information forms discrete portions).

8. With respect to Claim 3, Chang further teaches wherein said single data packet contains said update image parcel as a compressed data representation of said discrete portion of said predetermined image (In Chang: Col. 8 lines 56-67).

9. With respect to Claim 4, Chang further teaches wherein said single data packet contains said update image parcel as a fixed compression ration representation of said discrete portion of said predetermined image (In Chang: Col. 8 lines 56-67).

10. With respect to Claim 5, Chang further teaches wherein said update image parcel contains pixel data in a fixed size array independent of the pixel resolution of said predetermined image (In Chang: Col. 10 lines 46-65).

11. With respect to Claim 8, Chang teaches a method of transferring Large-scale images over a network with limited communications bandwidth (Col. 5 lines 56- 60), said method comprising:

- a) requesting image parcels from a network image parcel server providing for a progressive resolution enhancement of a defined image and subject further to an ordering reflecting a current image view point relative to said defined image (Col. 9 lines 40-66);

- b) receiving image parcels from said network image parcel server (Col. 9 lines 58-66), wherein said image parcels includes fixed dimension arrays of image pixel data (Col. 10 lines 46-65); and

- c) displaying said image parcels as corresponding portions of said defined image (Col. 9 line 61 - Col. 10 line 3 and Col. 7 lines 19-36).

12. With respect to Claim 9, Chang further teaches wherein said step of displaying includes a step of rendering of said fixed dimension arrays of image pixel data to a display of predetermined resolution wherein said fixed dimension arrays of image pixel data are sampled to obtain arrays of display pixel data corresponding to said

predetermined resolution (In Chang: Col. 11 line 59 - Col. 12 line 6 and Col. 6 lines 1-52).

13. With respect to Claim 10, Chang further teaches wherein said image parcels received from said network image parcel server are received through a packetized network and wherein said fixed dimension arrays of image data are sized such that said image parcels are received in respective network packets (In Chang: Col. 9 lines 33-39).

14. With respect to Claim 11, Chang further teaches wherein said fixed dimension arrays of image data are block compressed using a fixed ration compression algorithm (In Chang: Col. 8 lines 56-67 and Col. 10 lines 46-65).

15. With respect to Claim 19, Chang teaches a display system for displaying a large-scale image retrieved over a limited bandwidth communications channel (Col. 5 lines 56- 60), said display system comprising:

a) a display of defined screen resolution for displaying a defined image (Col. 9 line 61 - Col. 10 line 3 and Col. 15 lines 37-54) ;

b) a memory providing for the storage of a plurality of image parcels displayable over respective portions of a mesh corresponding to said defined image (Col. 13 lines 4-13);

c) a communications channel interface supporting the retrieval of a defined image parcel (Col. 9lines 33-66); and

d) a processor coupled between said display, memory and communications channel interface (Col. 14 lines 51 - Col. 15 line 67 describes the typical

hardware/software setup for a computer in the system), said processor operative to select said defined image parcel (Col. 9 lines 40-66), retrieve said defined image parcel via said communications channel interface for storage in said memory (Col. 9 lines 40-66), and uniquely render said defined image parcel over a discrete portion of said mesh to provide for a progressive resolution enhancement of said defined image on said display (Col. 9 line 61 - Col. 10 line 3 and Col. 7 lines 19-36).

16. With respect to Claim 20, Chang further teaches wherein said processor is responsive to said defined screen resolution and wherein said processor is operative to limit selection of said defined image parcel to where the resolution of said defined image parcel is less than or equal to said defined screen resolution (In Chang: Col. 9 lines 40-60).

Claim Rejections - 35 USC § 103

17. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of U.S. Patent 6,397,259 by Lincke.

18. With respect to Claim 2, Chang further teaches said communications channel is a packetized communications channel (Col. 9 lines 33-39).

Chang does not explicitly disclose the update image parcel is received in a single packet. Lincke teaches that image data can be reduced such that an image parcel can be received in a single data packet (Col. 7 lines 36-54, Col. 22 lines 56-65 and Col. 64

lines 35-52). This reduces the amount of traffic on a wireless communication link and improves access to information over the communication link (Col. 7 lines 36-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Lincke such that the method further comprises wherein said update image parcel is received from said packetized communications channel in a single data packet. One would be motivated to have this, as it is desirable to improve access to information available over low bandwidth networks (In Lincke: Col. 4 lines 38-40 and Col. 7 lines 36-54).

19. With respect to Claim 13, Chang teaches a method of transferring a large-scale image over a network with limited communications bandwidth for display on a client device having a screen of limited resolution, said method comprising:

a) selecting, for update, an image parcel having a defined parcel resolution and corresponding to a defined portion of a defined image that is displayed on a screen of defined screen resolution, wherein selection of said image parcel provides for a progressive resolution enhancement of said defined image subject to said defined parcel resolution being less than or equal to said defined screen resolution (Col. 9 lines 40-60 and Col. 6 lines 1-15 and lines 34-52);

b) requesting said image parcel from a network image parcel server by reference to said defined portion of said defined image (Col. 9 lines 40-60);

c) receiving said image parcel from said network image parcel server as data of a fixed dimension array of image pixel data (Col. 9 lines 61-66); and

d) displaying said image parcel as said defined portion of said defined image (Col. 9 line 61 - Col. 10 line 3 and Col. 7 lines 19-36).

Chang does not explicitly disclose the image parcel is received in a single packet. Lincke teaches that image data can be reduced such that an image parcel can be received in a single data packet (Col. 7 lines 36-54, Col. 22 lines 56-65 and Col. 64 lines 35-52). This reduces the amount of traffic on a wireless communication link and improves access to information over the communication link (Col. 7 lines 36-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Lincke such that the method further comprises receiving said image parcel from said network image parcel server in a single data packet as a fixed dimension array of image pixel data. One would be motivated to have this, as it is desirable to improve access to information available over low bandwidth networks (In Lincke: Col. 4 lines 38-40 and Col. 7 lines 36-54).

20. Claims 6, 7, 14, 15, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of U.S. Patent 6,801,665 by Atsumi et al. (Atsumi).

21. With respect to Claim 6, Chang does not explicitly disclose wherein said step of preparing includes associating a prioritization value to said request, wherein said prioritization value is based on the resolution of said update image parcel relative to that of other image parcels previously received by said client device; and wherein said step

of issuing said request is responsive to said prioritization value for issuing said request in a predefined prioritization order.

Atsumi teaches the use of a prioritization value associated with a request for image data, the image data based on the resolution of update image data relative to other image data already received (Col. 9 line 59 - Col. 10 line 13, Col. 10 lines 46-56 and Col. 15 lines 22-37). The request is responsive to said prioritization value for issuing said request in a predefined prioritization order (Col. 10 lines 46-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Atsumi such that the method further comprises wherein said step of preparing includes associating a prioritization value to said request, wherein said prioritization value is based on the resolution of said update image parcel relative to that of other image parcels previously received by said client device; and wherein said step of issuing said request is responsive to said prioritization value for issuing said request in a predefined prioritization order. One would be motivated to have this, as it is desirable to increase the speed and efficiency of image reconstruction (In Atsumi: Abstract and Col. 1 lines 2-49).

22. With respect to Claim 7, Chang further teaches wherein said prioritization values is further based on the relative distance of said update image parcel from said operator controlled image viewpoint (In Chang: Col 9 lines 40-50).

23. With respect to Claim 14, Chang does not explicitly disclose wherein said defined image is displayed as a mesh composite of a plurality of current image parcels and

wherein said step of requesting provides for prioritizing the request of said image parcel among a plurality of pending requests for image parcels wherein the relative priority of said image parcel is based on the difference in said defined parcel resolution and the resolution of said plurality of current image parcels.

Atsumi teaches the use of a prioritization value associated with a request for image data, the image data based on the resolution of update image data relative to other image data already received (Col. 9 line 59 - Col. 10 line 13, Col. 10 lines 46-56 and Col. 15 lines 22-37). The request is responsive to said prioritization value for issuing said request in a predefined prioritization order (Col. 10 lines 46-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Atsumi such that the method further comprises wherein said defined image is displayed as a mesh composite of a plurality of current image parcels and wherein said step of requesting provides for prioritizing the request of said image parcel among a plurality of pending requests for image parcels wherein the relative priority of said image parcel is based on the difference in said defined parcel resolution and the resolution of said plurality of current image parcels. One would be motivated to have this, as it is desirable to increase the speed and efficiency of image reconstruction (In Atsumi: Abstract and Col. 1 lines 2-49).

24. With respect to Claim 15, Chang further teaches wherein the relative priority of said image parcel is further based on the distance between said image parcel and a current image viewpoint relative to said defined image (In Chang: Col 9 lines 40-50).

25. With respect to Claim 21, Chang does not explicitly disclose wherein said processor is responsive to said defined screen resolution and wherein said processor is operative to limit selection of said defined image parcel to where the resolution of said defined image parcel is less than or equal to said defined screen resolution.

Atsumi teaches the use of a prioritization value associated with a request for image data, the image data based on the resolution of update image data relative to other image data already received (Col. 9 line 59 - Col. 10 line 13, Col. 10 lines 46-56 and Col. 15 lines 22-37). The request is responsive to said prioritization value for issuing said request in a predefined prioritization order (Col. 10 lines 46-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Atsumi such that the method further comprises wherein said processor is responsive to said defined screen resolution and wherein said processor is operative to limit selection of said defined image parcel to where the resolution of said defined image parcel is less than or equal to said defined screen resolution. One would be motivated to have this, as it is desirable to increase the speed and efficiency of image reconstruction (In Atsumi: Abstract and Col. 1 lines 2-49).

26. With respect to Claim 22, Chang further teaches wherein said processor is response to user navigation commands to define an image viewpoint relative to said defined image and wherein said processor is further operative to prioritize the retrieval of said image parcel based on the distance between said image parcel and said image viewpoint relative to said defined image (In Chang: Col 9 lines 40-50).

27. Claims 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of U.S. Patent 6,608,933 by Dowell et al. (Dowell).

28. With respect to Claim 12, Chang does not explicitly disclose wherein said fixed dimension arrays of image data have a minimum dimension of 16x16 pixels.

Dowell teaches the use of the minimum dimension of 16x16 pixels is a known technique in image technology such as JPEG compression (Col. 5 lines 29-32). Use of JPEG compression provides for excellent image quality to compression ratios (Col. 1 lines 14-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Dowell such that wherein said fixed dimension arrays of image data have a minimum dimension of 16x16 pixels. One would be motivated to have this, as it is desirable to have high quality images while still minimizing the transmission time on networks such as the internet (In Dowell: Col. 1 lines 12-23).

29. With respect to Claim 16, Chang does not explicitly disclose wherein said fixed dimension arrays of image data have a minimum dimension of 16x16 pixels.

Dowell teaches the use of the minimum dimension of 16x16 pixels is a known technique in image technology such as JPEG compression (Col. 5 lines 29-32). Use of JPEG compression provides for excellent image quality to compression ratios (Col. 1 lines 14-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Dowell such that wherein said fixed dimension arrays of image data have a minimum dimension of 16x16 pixels. One would be motivated to have this, as it is desirable to have high quality images while still minimizing the transmission time on networks such as the internet (In Dowell: Col. 1 lines 12-23).

30. Claim 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Dowell as applied to claim 16 above, and further in view of Lincke.

31. With respect to Claim 17, further teaches said communications channel is a packetized communications channel (Col. 9 lines 33-39).

Chang does not explicitly disclose said fixed dimension array of image pixel data is block compressed to fit said image parcel in said single data packet. Lincke teaches that image data can be reduced such that an image parcel can be received in a single data packet (Col. 7 lines 36-54, Col. 22 lines 56-65 and Col. 64 lines 35-52). This reduces the amount of traffic on a wireless communication link and improves access to information over the communication link (Col. 7 lines 36-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Chang and modify it as indicated by Lincke such that the method further comprises wherein said fixed dimension array of image pixel data is block compressed to fit said image parcel in said single data packet. One would be motivated to have this, as it is desirable to improve access to information

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available over low bandwidth networks (In Lincke: Col. 4 lines 38-40 and Col. 7 lines 36-54).


32. With respect to Claim 18, Chang further teaches further teaches wherein said fixed dimensional arrays of image data are block compressed using a fixed ratio compression algorithm (In Chang: Col. 8 lines 56-67 and Col. 10 lines 46-65).

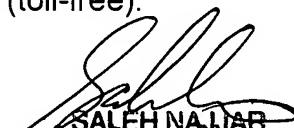
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David Lazaro
March 23, 2006


SALEH NAJJAR
SUPERVISORY PATENT EXAMINER